



Time to quantify gold discoveries

RIU Conference Sydney • May 2024

ASX:GSN

Disclaimer

Deposit	Competent Person	Employer	Professional Institute
Duketon, East Laverton and Mon Ami Exploration Results and Geological Interpretation	Rachel Backus	Resourceful Exploration Services Pty Ltd	AIG, AUSIMM
Mon Ami Mineral Resource	Dr Michael Cunningham	SRK Consulting (Australasia) Pty Ltd	MAusIMM, MAIG
Edinburgh Park Project	Rachel Backus	Resourceful Exploration Services Pty Ltd	AIG, AUSIMM

Competent Persons Statement

The information in this report that relates Exploration Results and Mineral Resources is based on the information of the Competent Persons listed in the table above. Each of the Competent Persons have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity they are undertaking to qualify as Competent Persons under the JORC Code 2012. For new information, each consents to the inclusion in the report of the matters based on his information in the form and context in which they occur. Previously announced information is cross-referenced to the original announcements. In these cases, the Company is not aware of any new information or data that materially affects the information presented and that the technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements of (GSN 25/1/19, 12/8/20, 2/3/21, 14/4/21, 21/7/21, 21/9/21, 5/10/21, 11/10/21, 28/10/21, 13/12/21, 17/1/22, 9/3/22, 31/3/22, 15/6/22, 29/6/22, 5/7/22, 8/11/22, 13/12/22, 27/3/23, 16/5/23, 21/6/23, 9/10/23, 9/11/23 and 31/1/24. References to ASX RRL announcements of 18/1/11, 8/3/11, 6/4/21, 31/3/22 are noted in the presentation).

ASX announcements are available on the Company's website at www.gsml.com.au

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Corporate Snapshot

A\$16.3M

Market Cap
(at \$0.020 per share)

817M

Shares on Issue

31.0M

Options (\$0.10 ave. exercise price)

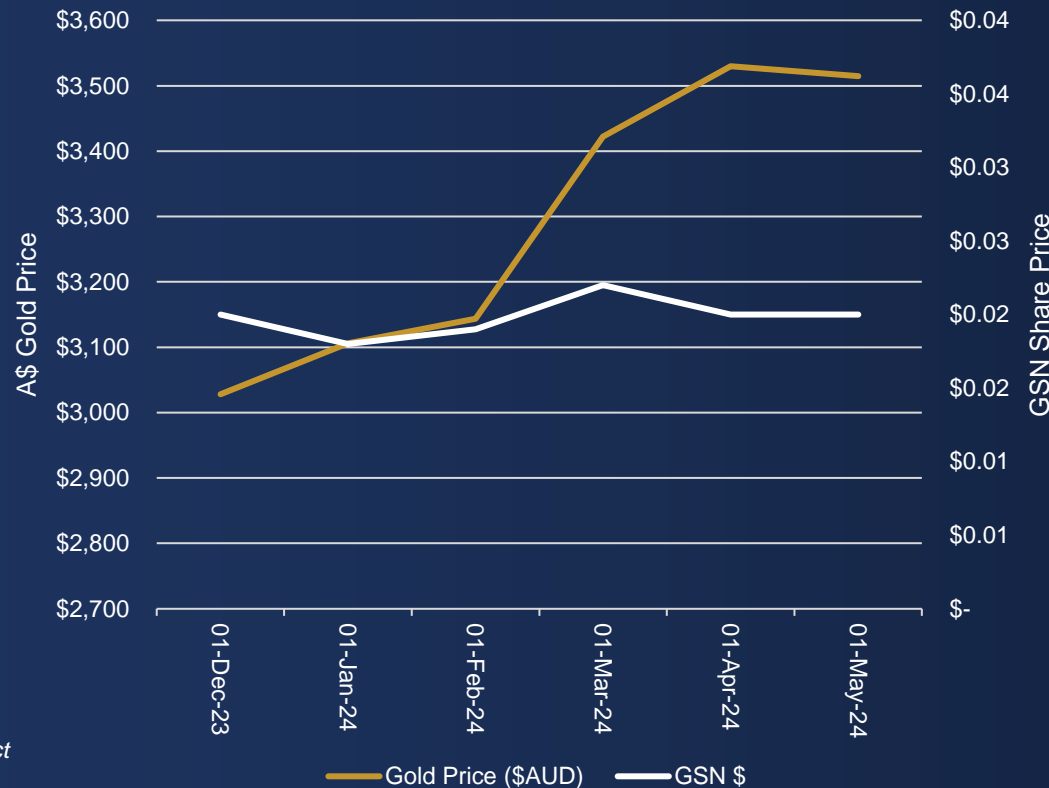
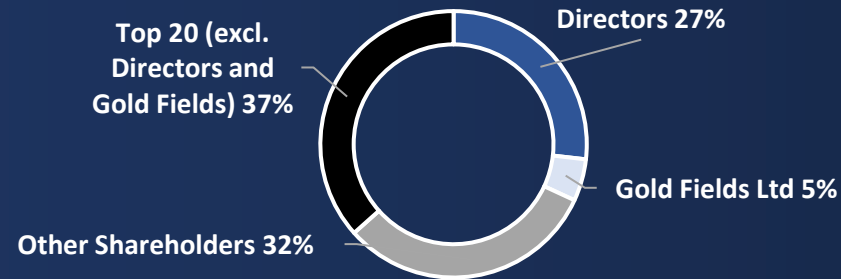
A\$1.4M

Cash (at 30 April 24)
Plus \$0.56M pending Shareholder approval*

A\$0.14M

Listed Investment
(ASX:RRR share holding value at 5 Mar 2024)

Shareholders



* Director contribution to April 24 Placement, subject to Shareholder approval

BOARD OF DIRECTORS

John Terpu

Executive Chairman

Over 22 years' experience in the mining & exploration sector, through acquisition and investment in many projects. Founder of Conquest Mining which discovered the Mt Carlton mine and went on to become gold major Evolution Mining. As Chairman of Emerchants Ltd, drove the company's market cap from A\$1m to over A\$150m.

Matt Keane

Managing Director

Geologist with 25 years of experience in mining, exploration and financial markets, including 8 years as a Resources Analyst. Mr Keane's technical career incorporated 10 years with BHP across various commodity groups.

Matthew Blake

Non-Executive Director

Mr Blake has 25 years' experience in the financial services industry and with companies listed on the ASX. Executive Director of Javelin Minerals Limited and NED with Crowd Media Limited.

Andrew Caruso

Non-Executive Director

Mining executive with over 25 years' experience in the Australian and international mining industries, including significant corporate leadership and business development experience.

Investment Highlights



Advanced gold discovery company



Leveraged to a rising gold price environment



All assets located within 40km of existing mineral processing infrastructure



Major exploration programs planned for 2024 – significant newsflow



Quality Board with skin in the game and a high-skilled exploration team



Queensland

Belt scale project in North Queensland Copper-Gold District (>20Moz)

■ Edinburgh Park

75% Gold Fields earn-in commenced

Western Australia

High quality gold projects in Laverton Gold District (>25Moz)

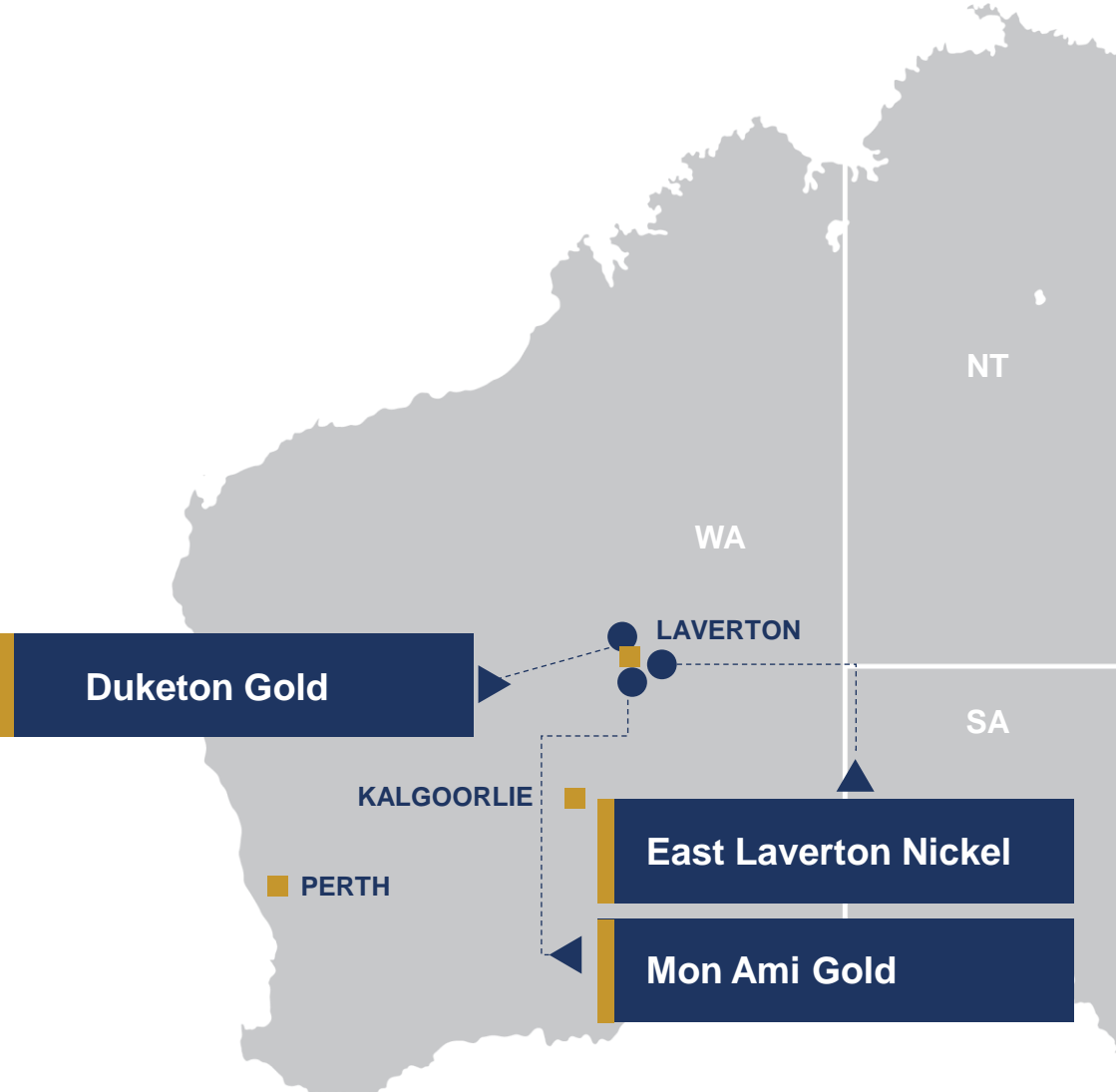
All projects 100% owned

■ Duketon Gold

■ Mon Ami

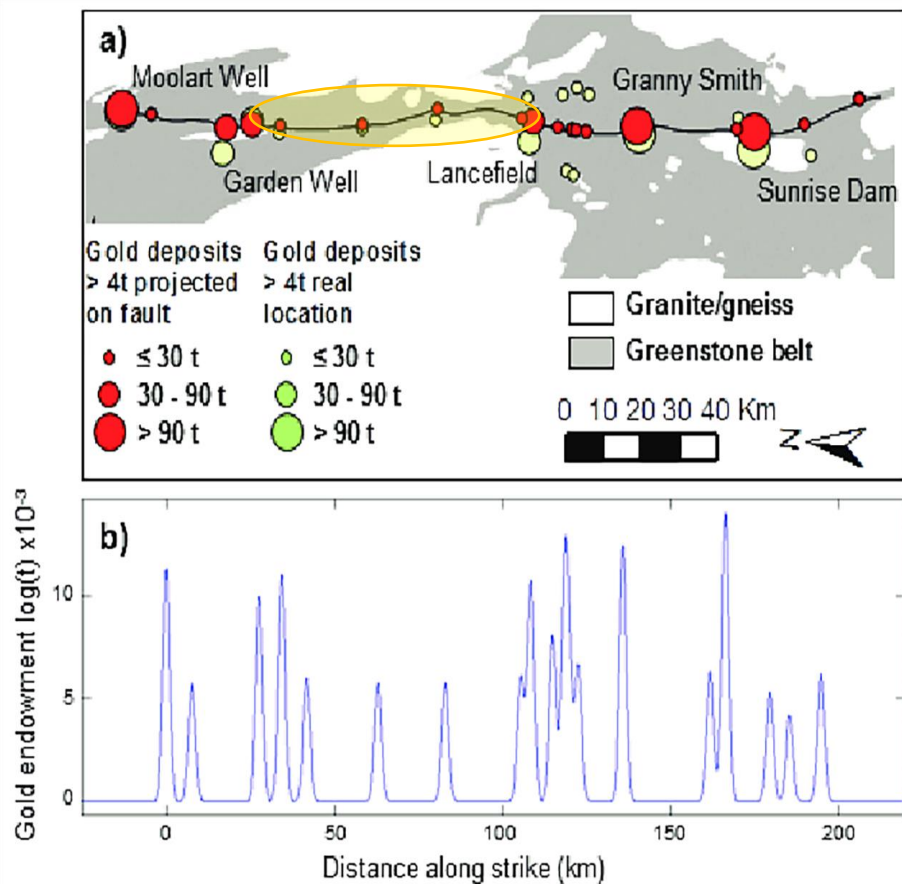
■ East Laverton Nickel

Advanced Western Australia Projects



Gold Camp Spacing

Where is the next +1 Moz hub?



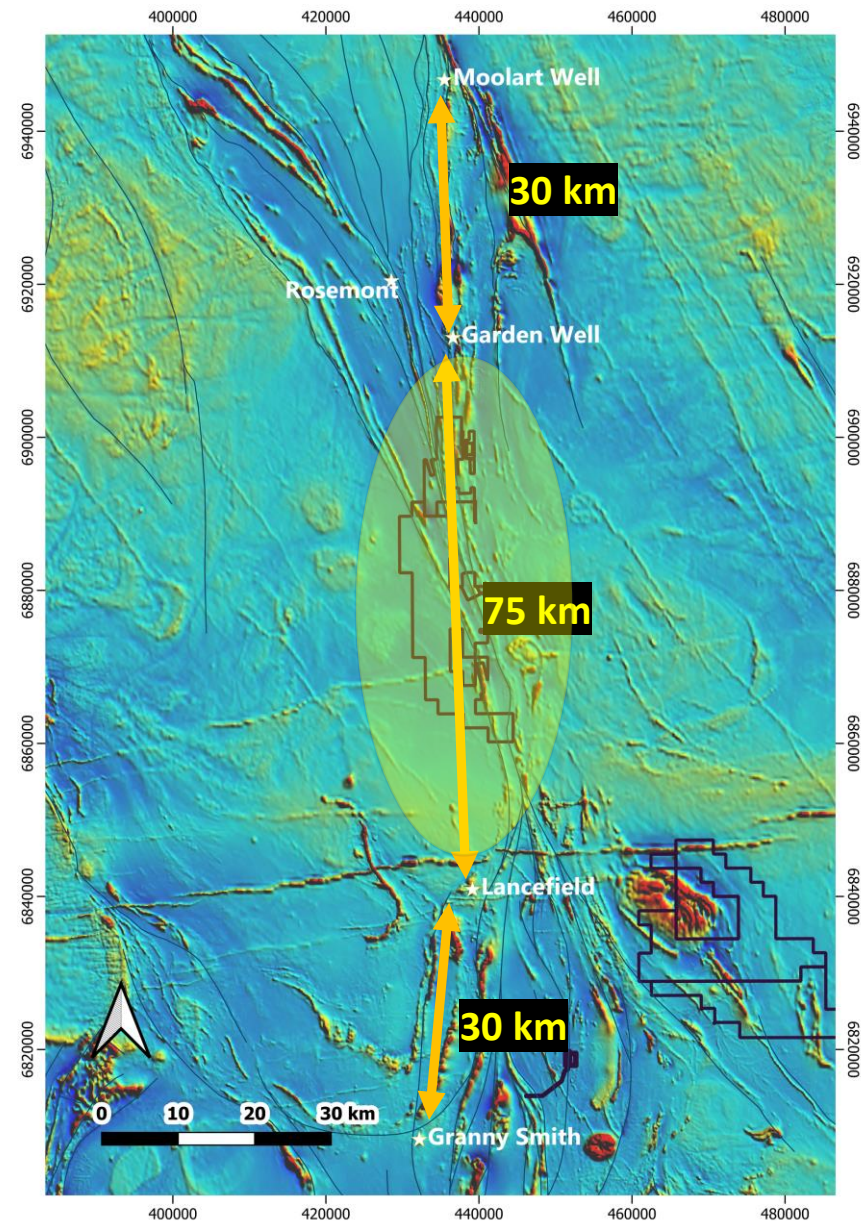
Major gold camps in the Eastern Goldfields have an average spacing of 30-40 km (Doutre et al., 2015).

GSN's tenements are located halfway between two major gold centres, spread ~75 km apart:

1. Garden Well Rosemont hub (>5 Moz)
2. Lancefield-Laverton (>2 Moz)

Therefore, GSN's Duketon tenure is highly prospective for a major gold deposit.

So, where is the +1Moz deposit?



Doutre, R., Micklethwaite, S., Kovesi, P., McCuaig, C. T., Ford, A., Hayward, N., ... & Sindern, S. (2015). Multi-scale spacing and endowment of orogenic gold deposits. *Vandoeuvre-Les-Nancy: Asga-Assoc Scientifique Geologie & Applications*.

Duketon Gold Project

Three advanced target areas

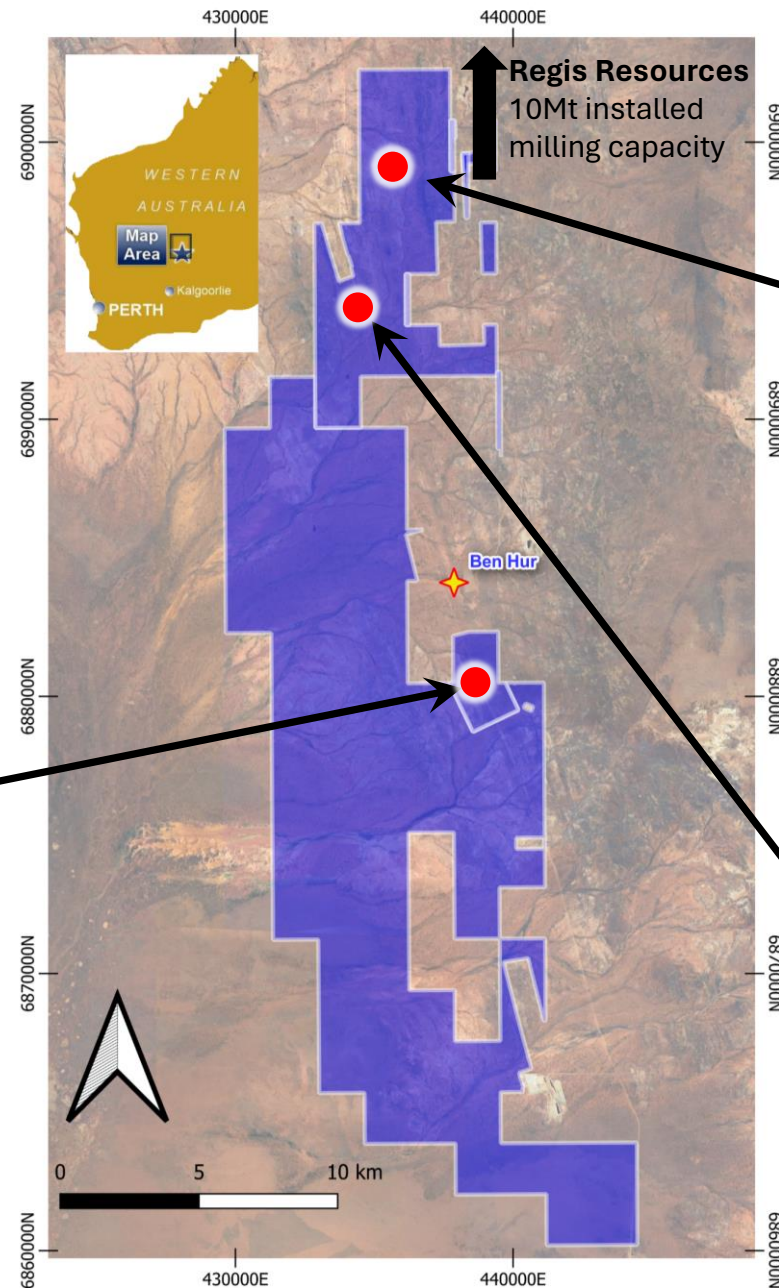
- All with high grade intercepts
- All with extensive untested strike
- All located on highly mineralised structures with defined resources

Southern Star

- **Granted Mining Licence**
- **1.9km** gold mineralised trend, including 700m of contiguous mineralisation
- Gold intercepts¹ include
 - 68m @ 1.9 g/t Au from 61m
 - 59m @ 2.1 g/t Au from 53m
- Only 3km from 390k oz Ben Hur open pit

Plus, a pipeline of earlier stage target areas within a 388 km² landholding

1 - Refer to GSN:ASX announcements 5/10/21, 11/10/21, 23/8/21, 2/8/21 and 29/6/22.



Regis Resources
10Mt installed
milling capacity

Amy Clarke

- **Over 5km** of anomalous strike with at least 2 mineralised trends
- Gold intercepts² include
 - 8m @ 6.7 g/t Au from 32m
 - 4m @ 2.1 g/t Au from surface
- Virtually, unexplored and along strike from 320 koz Erlistoun open pit

Golden Boulder

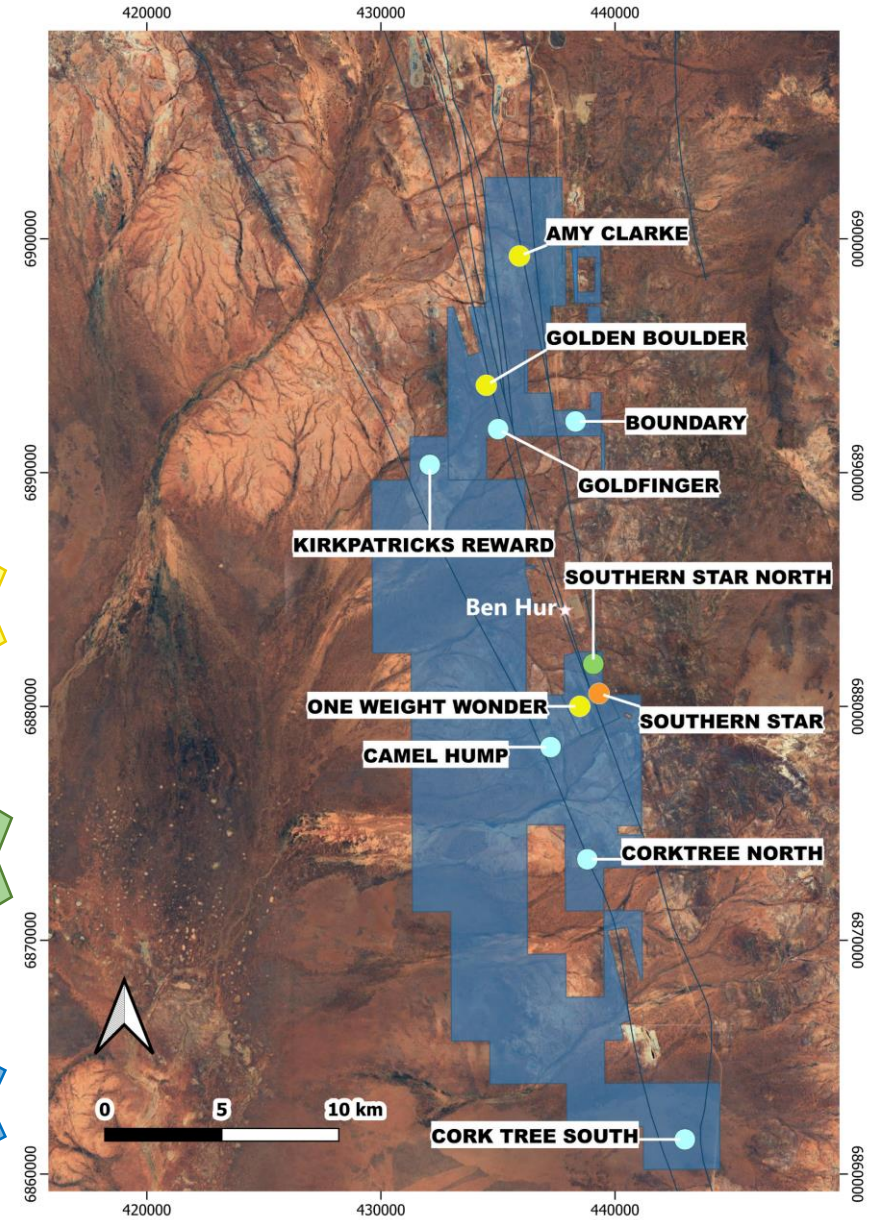
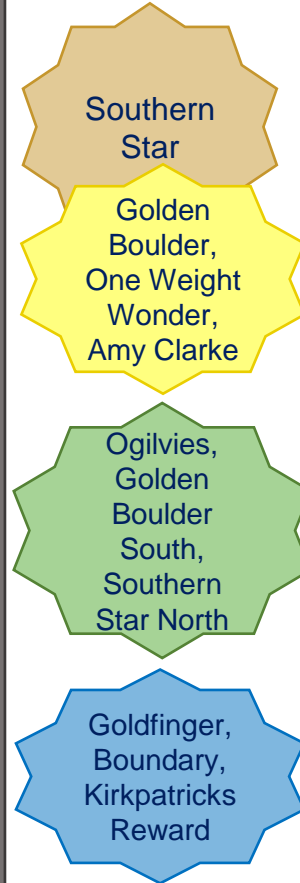
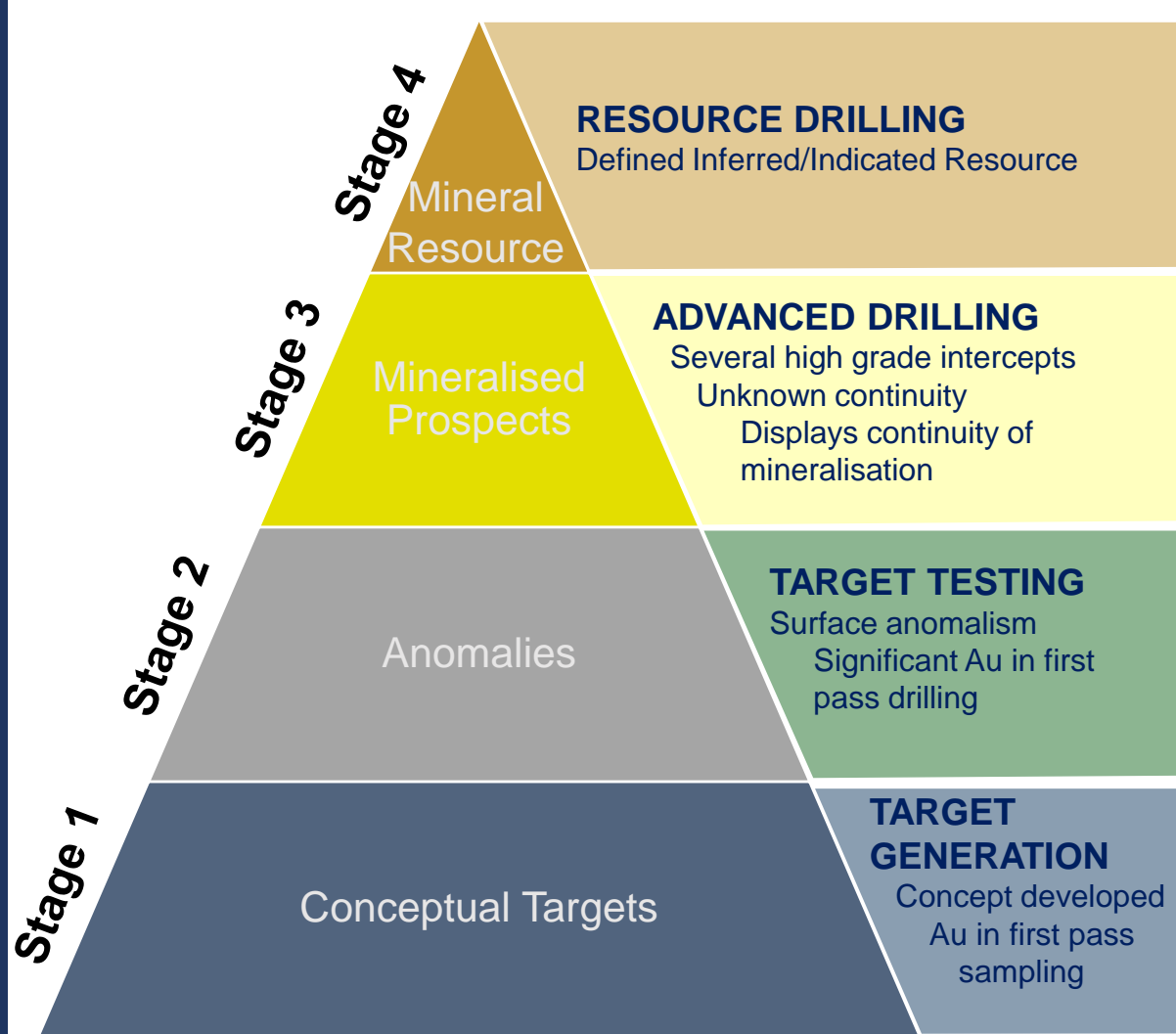
- **Over 4km** of anomalous strike
- Contains ~50 shallow historical shafts
- Gold intercepts³ include:
 - 8m @ 3.9 g/t Au from 44m
 - 5m @ 3.3 g/t Au from 49m

2 - Refer to GSN: ASX announcements 13/4/22

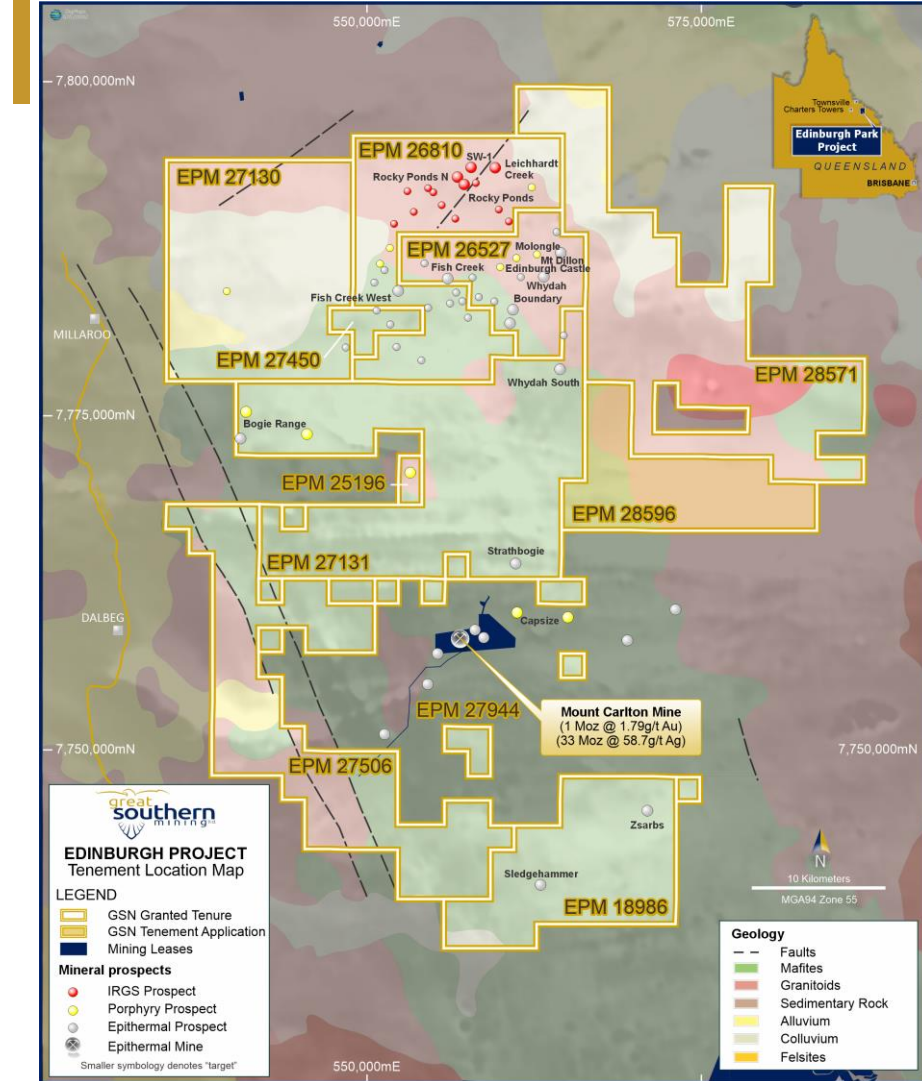
3 - Refer to GSN: ASX announcements 16/5/23

Duketon Gold Project

Advancing a Strong Pipeline



Province Scale Edinburgh Park Project Queensland



GSN's Edinburgh Park Project highlighting proximity to Mt Carlton Mine.

Edinburgh Park

Gold Fields Earn-In, Credentialed Partner for Tier One Discoveries

- Belt scale play with ~1,750km² tenure surrounding 1.7Moz Au Eq Mt Carlton Mine
- Prospective for gold-copper porphyry mineralisation, as well as high and low sulphidation gold-silver-copper mineralisation
- **29 targets** identified by GSN¹

Gold Fields Earn-in

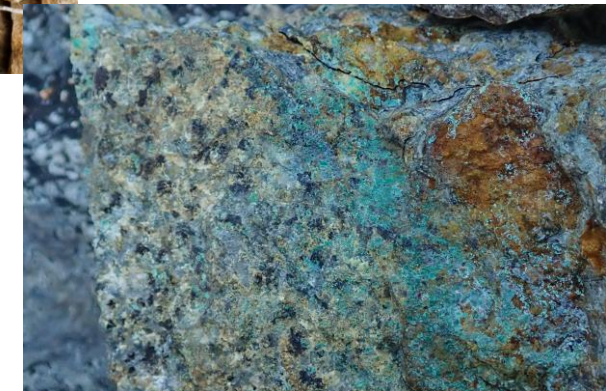
- Gold Fields spending up to **A\$15m over 6 years** to earn a 75% interest²
 - **Minimum spend of A\$2.5m** in the first 2 years
- Gold Fields also subscribed to **A\$1m GSN shares** for a 5.1% holding
- Gold Fields is the ideal partner with experience and funding to discover major porphyry/epithermal deposits
- Geophysics commenced in 2023 and drilling expected to commence in 2024



Epithermal style quartz stockworks at Megan Veins target, with rock chip samples grading up to 10g/t gold



Quartz, pyrite fracture veining at Leichhardt Creek target



Copper and silver rich porphyry specimen from Molongle Creek target

¹ Refer to GSN:ASX announcement date 29 June 2023

² Refer to GSN:ASX announcement date 9 October 2023

Why invest in Great Southern Mining?



High quality projects
in premium locations
near hungry mills



Moving from target
generation phase to
resource definition in 2024



Significant newsflow
planned over next 6-12
months



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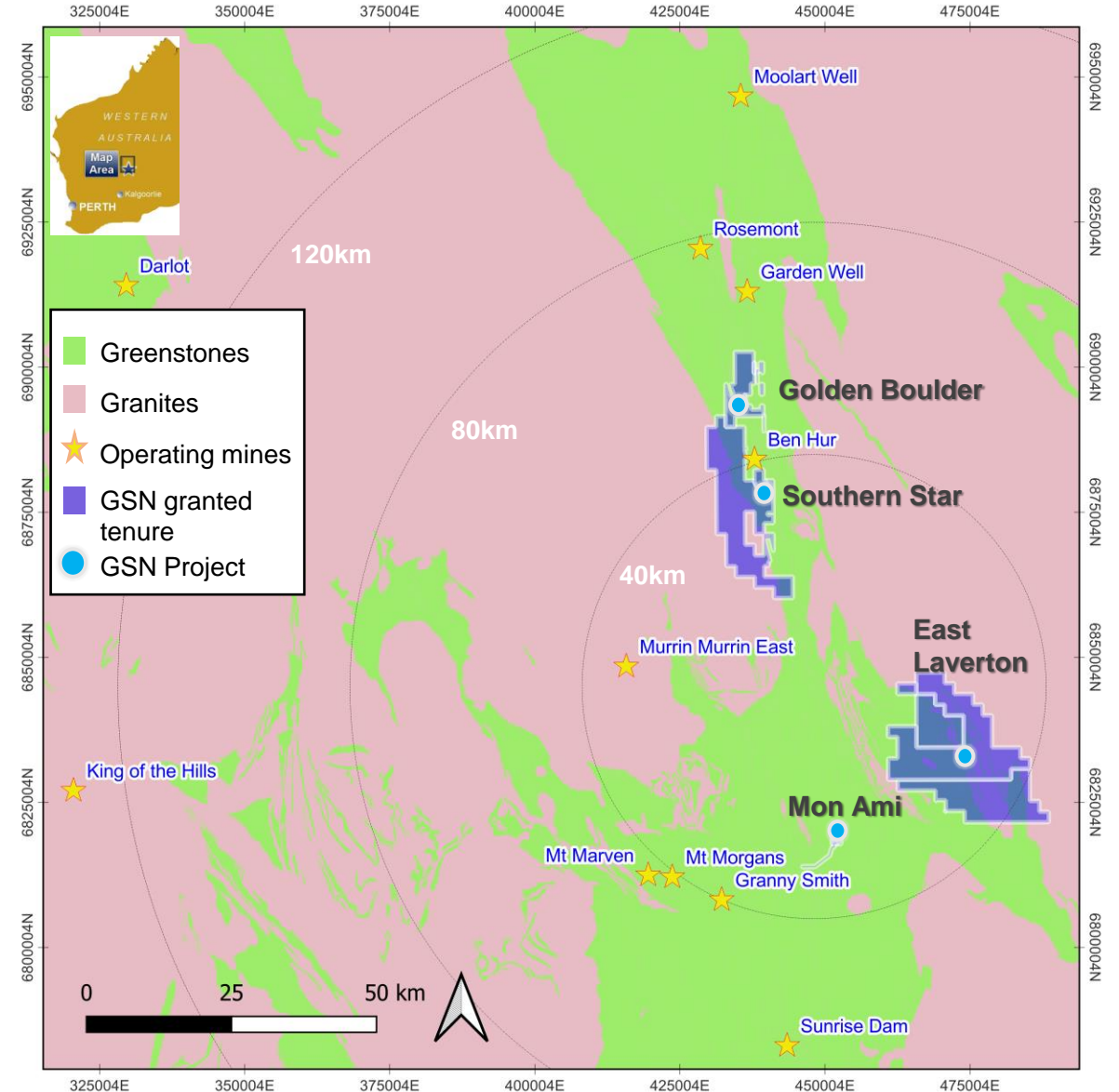
Appendices

1. Western Australia “Game of Mines”
2. Underexplored Duketon Belt
3. Southern Star – Ben Hur Analogue
4. Golden Boulder Prospect
5. Amy Clarke Prospect
6. East Laverton Project
7. Mon Ami Project

LAVERTON-LEONORA

“Game of Mines”

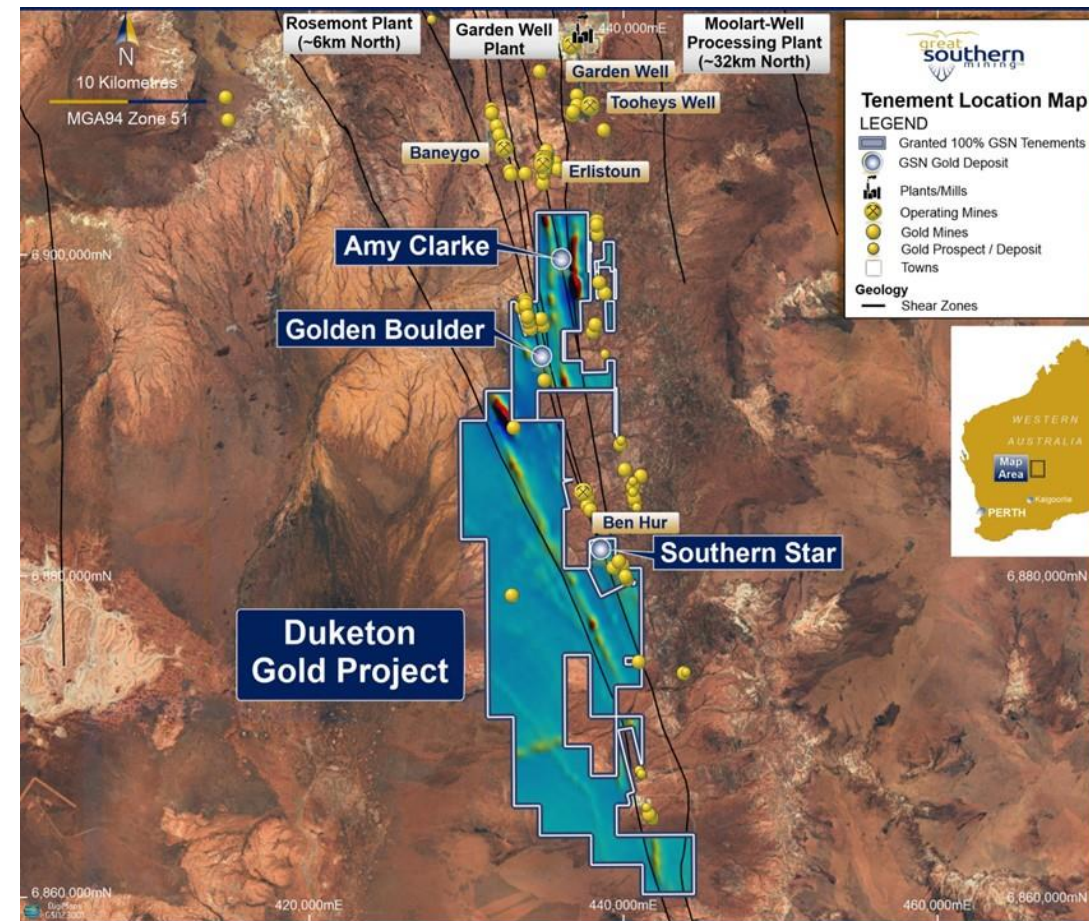
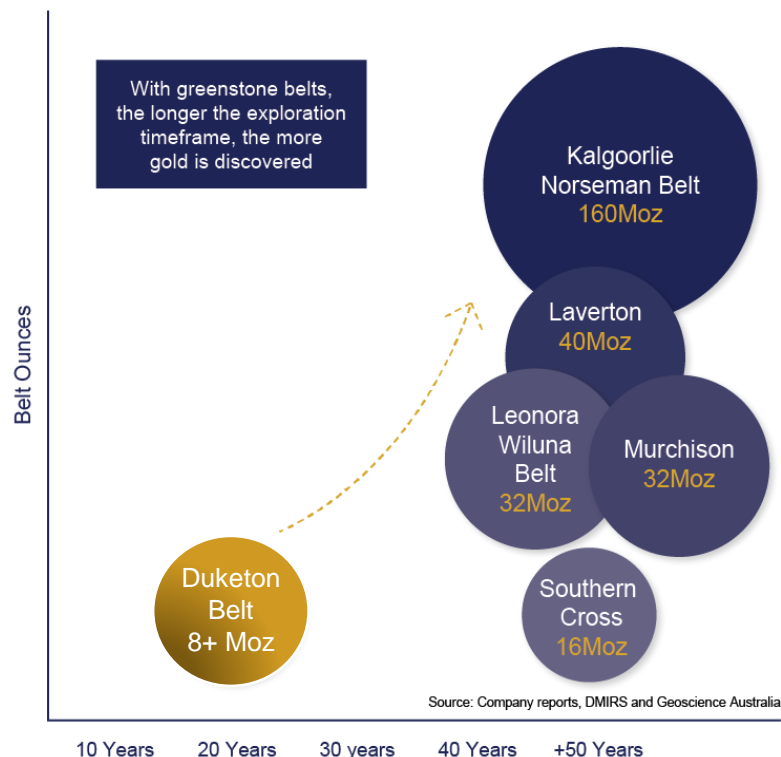
- Consolidation underway around existing infrastructure throughout the goldfields – Why is this happening?
 - Existing mills are growing short of ore feed
 - In the current environment, it is expensive to build new infrastructure
 - Permitting and access to people and materials is pushing out development timelines
- Significant advantage for advanced projects around installed infrastructure, compared to a standalone resource
- GSN WA projects are surrounded by significant installed milling capacity
 - Approx. 20Mtpa mill capacity within 200km of GSN projects
 - On current throughput, these mills ~20% underfed or mills are on care and maintenance



Duketon Gold

Underexplored greenstone belt

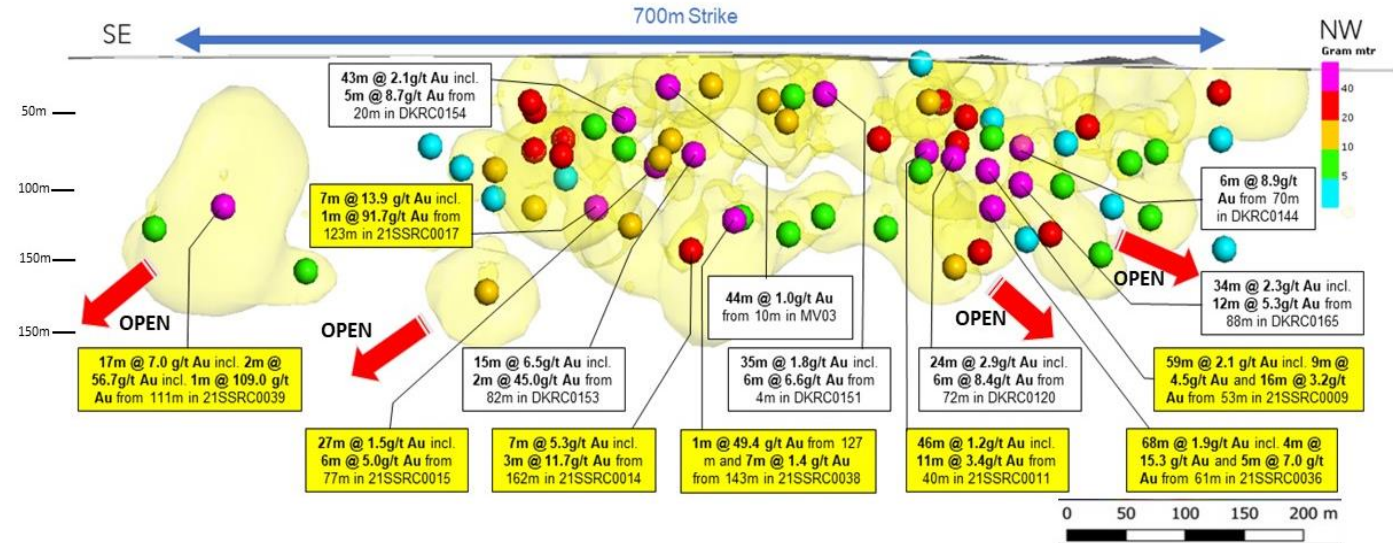
- Duketon Belt is still immature compared to other WA Gold Belts
- Gold deposits focussed on three major structural trends
- All three trends continue through GSN 388 km² tenure
- GSN tenure remains sparsely drilled
 - Yet 3 compelling prospects defined to date, all with high grade intercepts and scale potential
- Multiple other high priority targets remain untested



Map of GSN's 100% owned Duketon Gold Project and surrounding operating mills owned by Regis (ASX: RRL)

Southern Star

- Southern Star is a **large contiguous mineralised gold** system currently defined over ~700m
- Southern Star is considered an analogue to Regis Resources' 390koz Ben Hur deposit, located ~3km to the north within the same geological host
- Majority of Southern Star drilling above 160m below surface – well within reach of potential open pit mining
- Better drill intercepts to date include¹:
 - **69m @ 1.1g/t Au** from 39m, incl. **10m @ 3.5g/t AU**
 - **68m @ 1.9g/t Au** from 61m, incl. **4m @ 15.3g/t Au**
 - **59m @ 2.1g/t Au** from 53m, incl. **9m @ 4.5g/t Au**
 - **17m @ 7.0g/t Au** from 11m incl. **1m @ 109.0g/t Au**



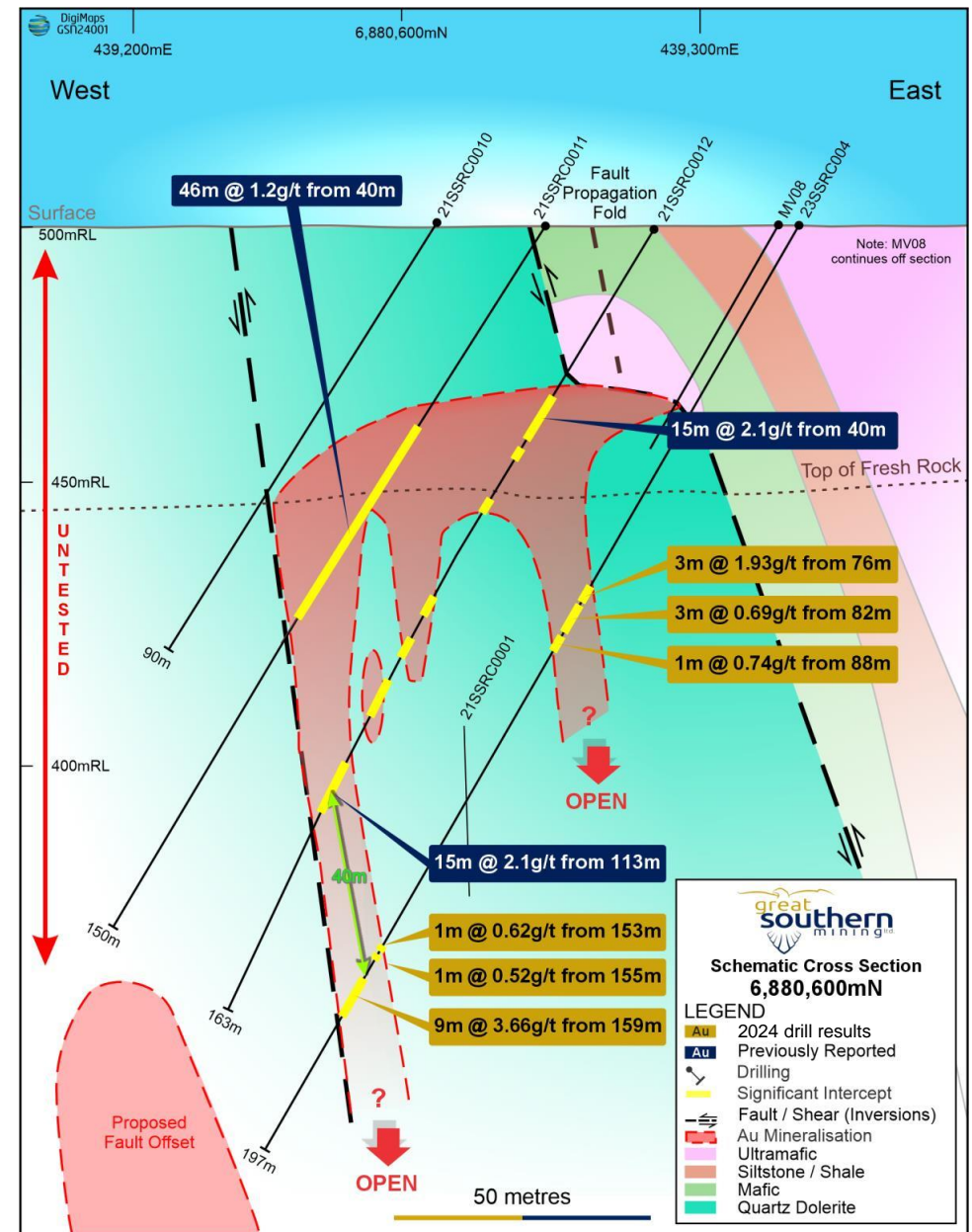
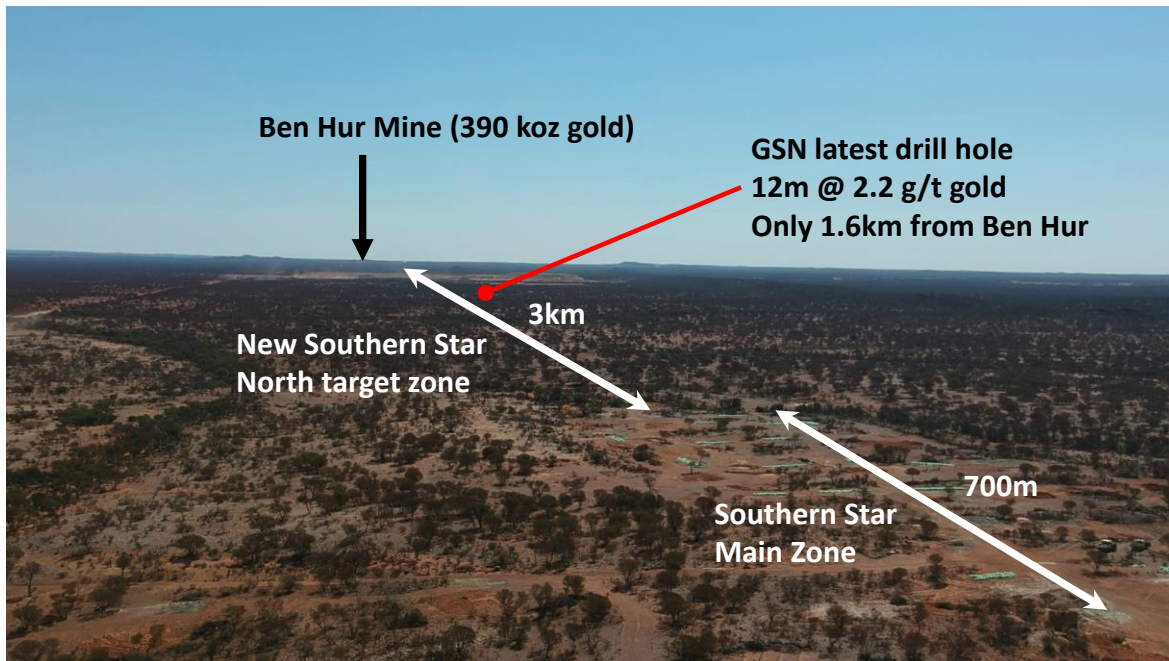
Long Section of the Southern Star mineralisation showing selected gold intercepts. Mineralisation remains open in nearly every direction including down-plunge, down-dip and along strike to the north and south.

¹ Refer to ASX GSN announcement 29/6/22

Southern Star

Advanced Gold Prospect

- 11km of prospective strike
- Mineralisation in drilling over 1.9km
- 700m of defined contiguous mineralisation
- Only shallow drilled to ~160m below surface
- Mineralisation open in nearly every direction
- 3km from Regis Resources Ben Hur mine



Refer to further commentary in the GSN:ASX announcement of 31 January 2024

Duketon Gold

Golden Boulder Area – Emerging Discovery

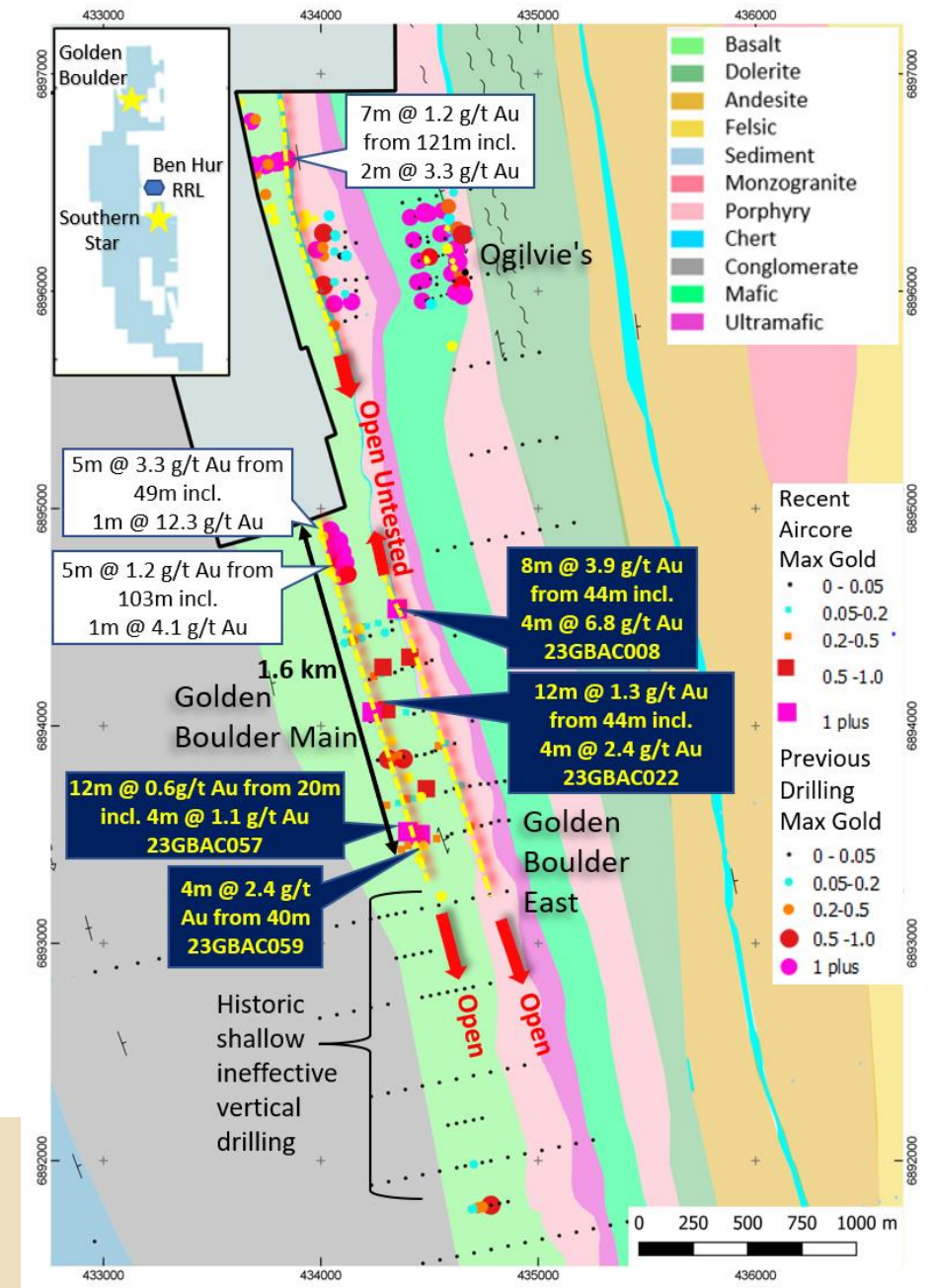
- Multiple parallel gold trends with over 50 historic shafts
- Historic drilling is sparse and shallow (average depth just 40m) and in some areas ineffective due to hard ferricrete crust
- RC drilling in 2021 returned **5m @ 3.3g/t Au** from 49m, incl. **1m @ 12.3g/t Au** and **8m @ 2.1g/t Au** from 32m, incl. **4m @ 3.7g/t Au**¹
- Aircore drilling in 2023 returned **8m @ 3.9g/t Au** from 44m, incl. **4m @ 6.8g/t Au** and **12m @ 1.2g/t Au**, incl. **4m @ 2.4g/t Au**²
- Mineralisation on Golden Boulder Main line defined over 1.6km strike
- Prospective horizon on Golden Boulder East identified over 3km on GSN tenure
- Mineralisation open along strike and at depth

¹ Refer to ASX:GSN Announcements 8/7/21, 23/9/21

² Refer to ASX GSN announcement 16/5/23

Next steps:

Follow up and step out RC drilling



Duketon Gold

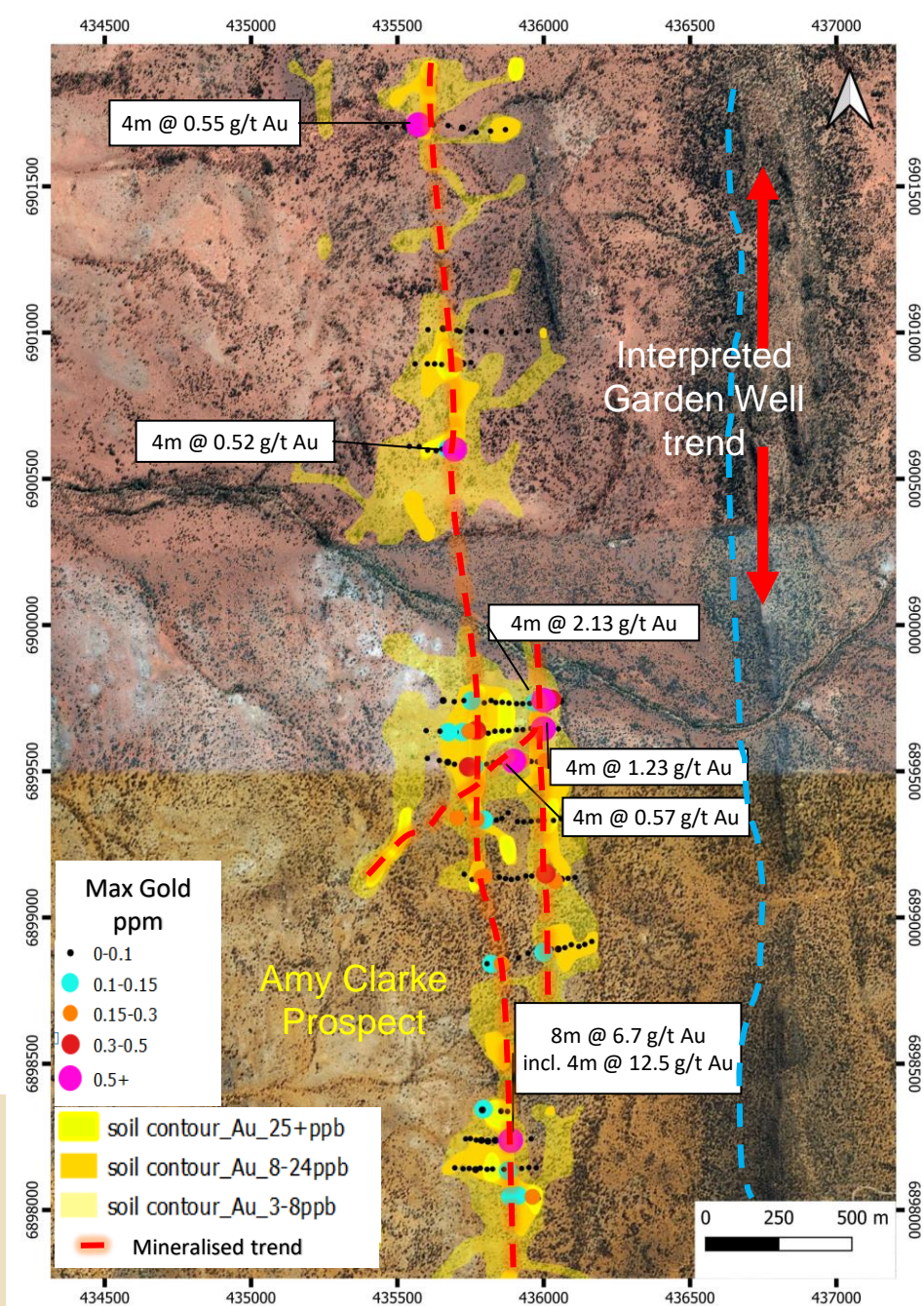
Amy Clarke

- Tenement acquired in late-2020 with little historical exploration undertaken
- 8km from Garden Well processing facility
- 5km gold anomaly identified in shallow aircore drilling and soil geochemistry
- Main anomalism sits along strike (less than 3.5km) from Regis' Eristoun pit with 320koz @ 1.9 g/t Au¹
- Similar surface gold anomalism to Regis' Garden Well anomaly prior to the 2.1 Moz @ 1.4 g/t Au gold discovery¹
- GSN drilling in 2021 confirmed two significant mineralised trends including an intercept of:
 - **8m @ 6.7g/t Au** from 33m, including **4m @ 12.5g/t Au**²
- Garden Well trend to the east remains virtually untested

¹ Source: ASX:RRL announcements 8/3/11, 18/1/11

² Refer ASX announcement 17/1/22

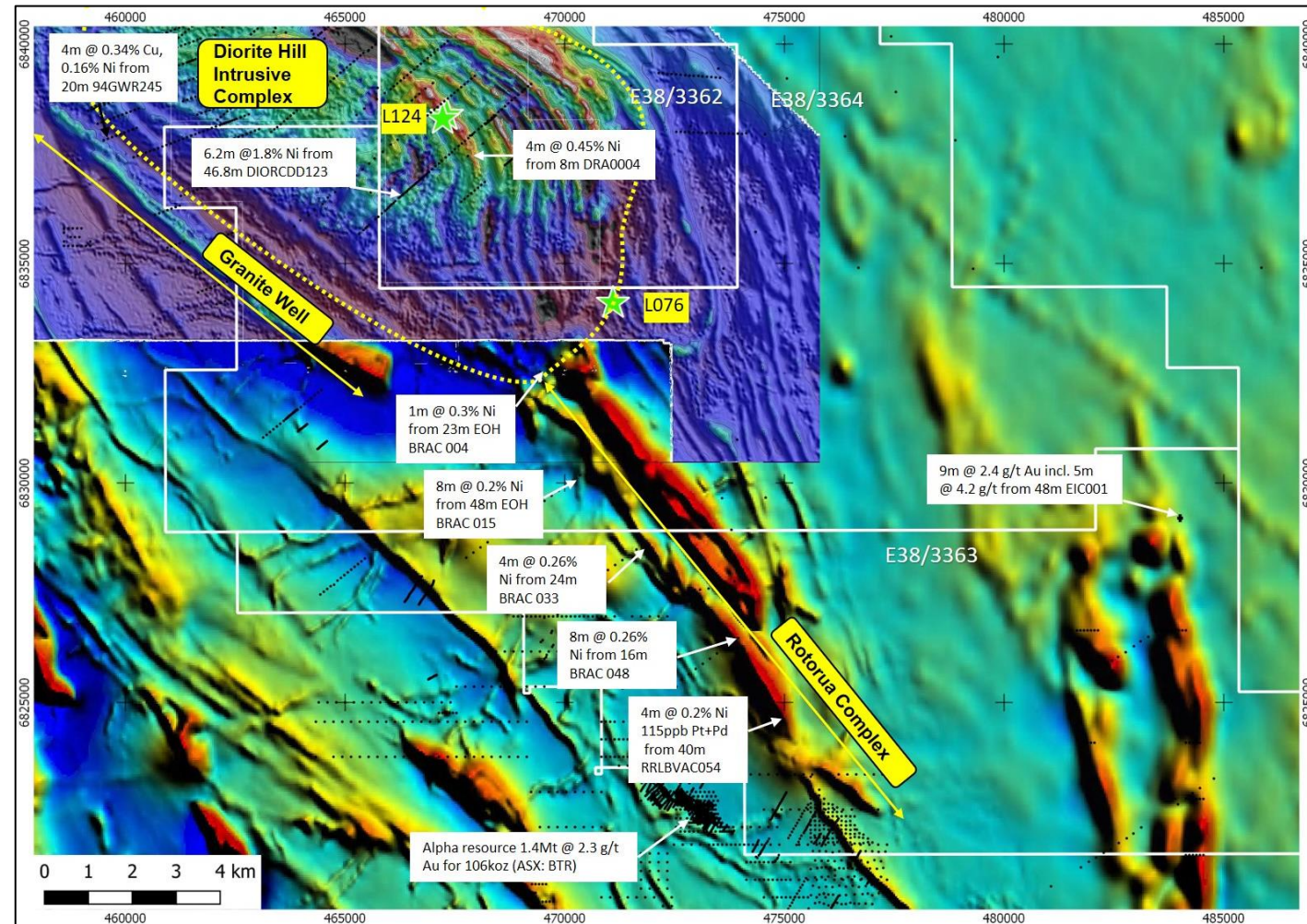
Next steps: Follow up RC drilling to previous high grade intercepts. Extensional aircore drilling over southern extension geochemical anomaly



East Laverton Project

Nickel and Gold Potential

- Project area of 407km²
- Prospective for both intrusive magmatic and komatiitic nickel–copper–PGE mineralisation
- 4 conceptual target areas:
 - Diorite Hill layered intrusive
 - Rotorua Komatiite trend
 - Granite Well Komatiite trend
 - Karora Ultramafic trend
- Diorite Hill drilling program in late-2022 proved the right geology – follow up exploration required
- 14km of komatiite trends to be tested with EM
- Gold potential still to be tested
- Historic gold intercept of **9m @ 2.4g/t Au**, incl. **5m @ 4.2g/t Au** in the east never followed up



Magnetic image highlighting the Rotorua and Granite Well targets with drillhole database displaying Newmont significant intersections along the edge Rotorua complex. Refer to Brightstar Resources (BTR) 2021 Annual Report for Alpha Gold Resource.

Mon Ami Gold Project

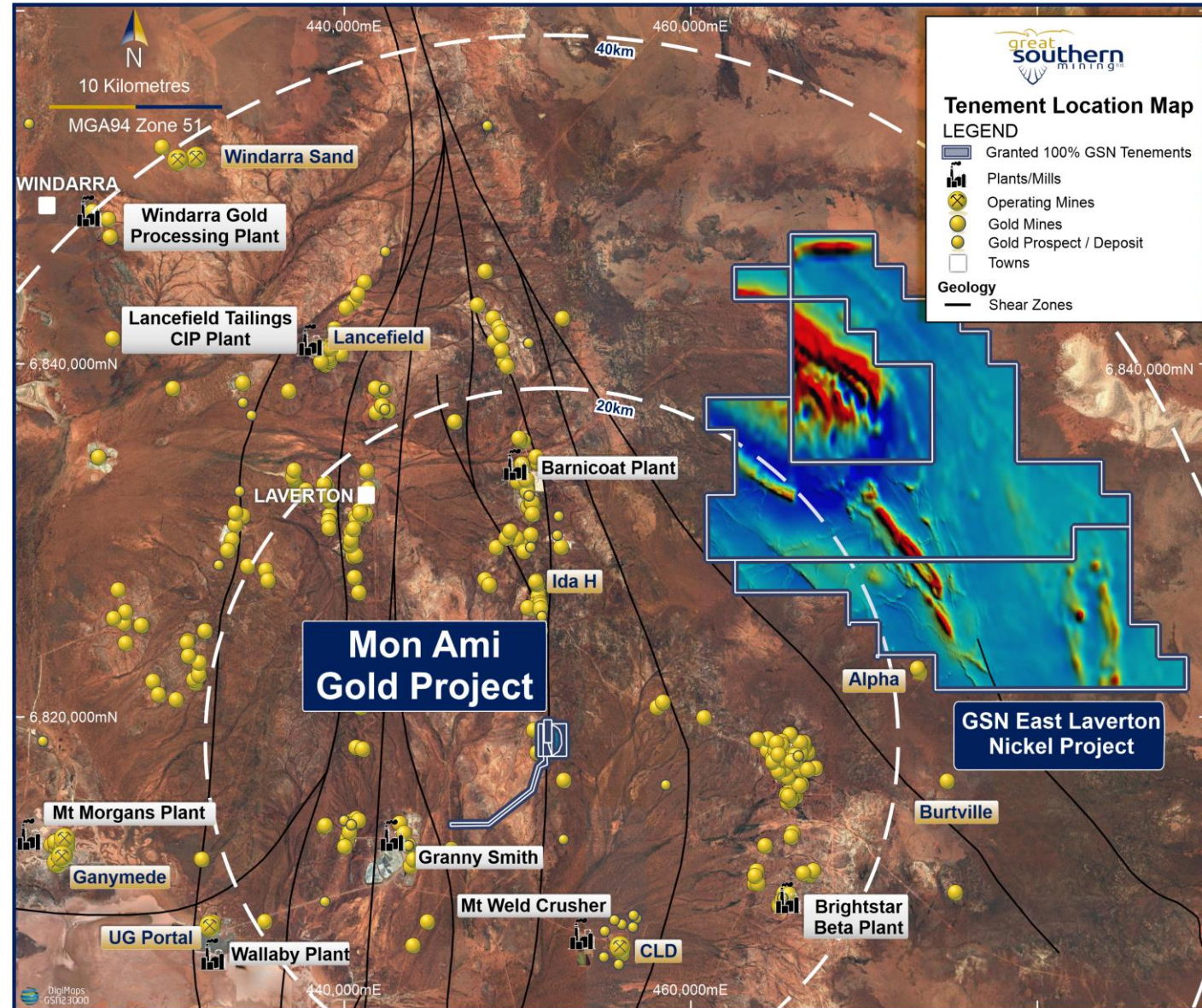
Shovel Ready Gold Resource

- Established 1.56Mt @ 1.11g/t Au for 55koz Mineral Resource¹

	COG (g/t)	Tonnage (Mt)	Grade (g/t Au)	Metal (Oz Au)
Indicated	0.5	1.41	1.16	52,500
Inferred	0.5	0.15	0.61	3,000
Total	0.5	1.56	1.11	55,500

- Shovel ready on a granted Mining License with requisite mining and environmental studies complete
- Permitted haul access route to nearest major highway
- Within trucking distance to at least three gold processing facilities

¹ Source: ASX announcement 21/7/21. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcements regarding the MRE.





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